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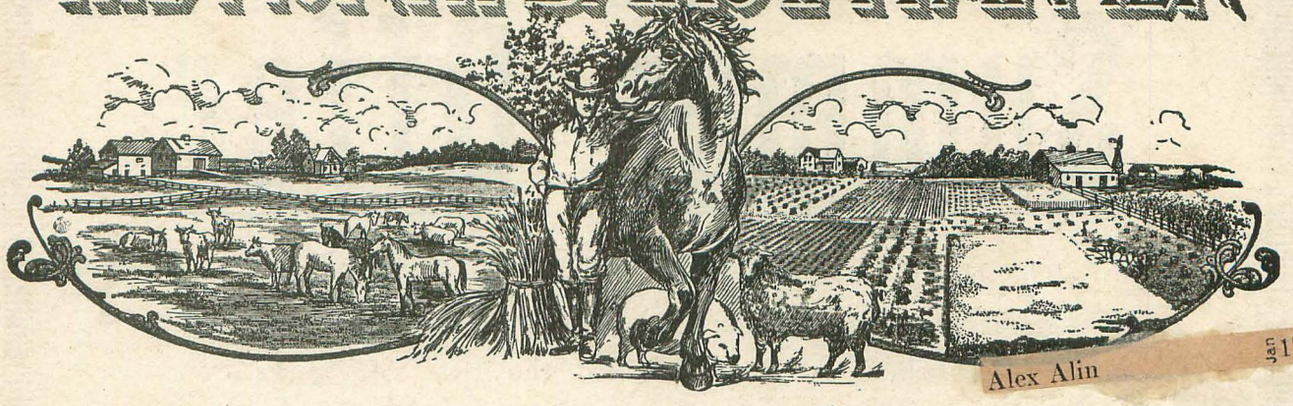

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THE NORTH DAKOTA FARMER

Vol. 15, No. 12 LISBON N. D., JUNE 15, 1914 50 Cents a Year

The RURAL PROBLEM

By President J. H. Worst, N. D. A. C.

THE rural problem is attracting the attention of public-spirited men and women as never before. And there is reason for it. The soil produces about ninety-eight per cent of the food stuff for sustaining the human family and most of the raw material for clothing them. The actual necessities that our civilization demands, therefore, must come chiefly from the rural districts. If rural life is not made satisfying and desirable, the most energetic class of young people will cast their lot, as so many are now doing, in other vocations. Moreover, if the profits of the farm are not reasonably sure and as large as may be realized in other vocations, farm life will be neither satisfying nor desirable.

There is one thing about farming, however, that must not be overlooked, Without large capital there is scarcely any other industrial occupation that young men may enter without being somebody's hired man. In other words, independence can be had in no other vocation on such easy terms or with so little capital as by securing a piece of land. This does not imply that in order to become an independent farmer one must possess a section or even half a section of land. Properly managed a quarter-section farm should afford a good living and enable its owner to support a family and save sufficient in the course of a lifetime to maintain him in comfort during his declining years. So far as real enjoyment is concerned this is about all one should expect. Even eighty acres will, if well managed, do as much. The fact is that large farms, as a rule, do not produce more than a fraction per acre of what they are capable of producing.

A small farm well tilled, kept clear of weeds, and highly fertilized, will prove more satisfying and profitable than a much larger farm, indifferently managed. While land is still comparatively cheap a young man can do no wiser thing than to secure a farm, —even a small one,—and begin life as an independent farmer.

The independence of the farmer, however, is not stating the whole truth. The individual farmer is not wholly independent. Nevertheless, the

Pres. J. H. Worst

"farming class" by acting co-operatively can make their vocation much more independent than for each farmer to manage his business in an individual way. In fact individualism has enabled middlemen and speculators to reap an undue share of the profits that legitimately belong to the farmer. Then by entrusting the affairs of the government entirely to lawyers, bankers and other professional and business men, the laws are so framed and construed that economic justice for the producing class, of which the farming class is by far the most important, is not always enjoyed by those who "perform the world's work." This can be remedied and should be remedied.

Interest rates are too high, there is too much speculation in the products of the farm, and many commodities that consumers purchase are not what they purport to be. Taking into consideration short measure, light weight, dividends on watered stock, adulterated food and shoddy fabrics, the people as a whole, and farmers in particular, have much cause for complaint. Could some of these evils be abated and speculation in farm products be outlawed, the profits of the farm would be materially augmented with injury to no one except to the grafters.

One would think that our law-makers would remedy these evils, but the fact remains they have not. The piratical interests seem somehow to control the laws to suit themselves. It would seem, therefore, about time for the producers of farm products to take a more active interest in political affairs where their interests are concerned, instead of electing to office men who are not conversant with their needs and who are not in sympathy, except theoretically, with their vocation.

Of course, a hue and cry will be immediately raised against "class interests," but it will be noted that the remedy these gentlemen propose to forestall class interests is to elect **them** to office,—just what the voters have been doing for lo! these many years, but with somewhat unsatisfactory results.

The big interests are pretty well represented and have been right along. There are now about 250 lawyers in Congress while the agricultural interests, involving an investment of more than $40,000,000,000 and an annual product of approximately $10,000,000,000, are represented by less than a corporal's guard. True, some of the Nation's representatives own

and rent land and many boast that they were born on the farm, but few of them are familiar with the farmer's responsibilities, or are in practical sympathy with his problems.

The rural problem is bigger and more far-reaching than the average city man is able to comprehend. The sequel proves it.

NORTH DAKOTA LIVSETOCK DEMONSTRATION TRAIN

W. C. Palmer, Agr. Ed. N. D. A. C.

The North Dakota Experiment Station and the Soo Railroad have run a livestock demonstration train over the branch lines of this road in North Dakota.

The Experiment Station equipped the train with livestock and furnished the lecturers while the Soo Railroad provided and hauled the train.

Two-hour stops were made at thirty-seven points, three to four being made a day. The trip was covered in ten days. The total attendance was 13,760.

The stock was carried in a furniture car which had a flat car at each end, on to which the stock were brought for the demonstrations. The cattle were, in nearly every case, unloaded and shown on the ground, while the sheep and hogs were brought on to the flat cars. The stock consisted of good practical types of beef and dairy cattle, lard and bacon hogs, and sheep. This stock was all from the North Dakota Experiment Station farm, being stock used in the experimental work. The most noted of the cows was the Holstein Madison Miss Ormsby. Her record for the last year was 20,883 pounds, 3.77 milk, which amounted to 9.26 pounds, 85% butter. This is the champion cow of North Dakota.

G. W. Randlett, of the Experiment Station was in charge of the train the first week, while Professor Sheppard, Agriculturist of the North Dakota Experiment Station, had charge of it the second week. The lecturers included L. Van Es, veterinarian of the North Dakota Experiment Station, who gave special attention to hog cholera; John Christianson, farmer and stock breeder, of New Salem, took up dairying, and especially dairy records; A. E. Nelson, county representative of Steele County, gave lectures on dairying; W. H. Peters, of the Manitoba Agricultural College, devoted most of his time to beef cattle; E. J. Thompson, animal husbandman of the North Dakota Experiment Station, gave discussions on hogs; J. C. Hoke, special livestock agent of the North Dakota Experiment Station, centered most of his talks on cooperation, and the use that can be made of this in improving stock.

The outstanding lessons from the different discussions were these: That good stock, well fed, give good returns; that good stock can be secured by grading up the common stock by the use of pure bred sires; the first cross will be a big improvement, while the second cross will be nearly as good as the pure bred from the standpoint of production. The cheapest, as well as the best way is for those in a community that are interested in dairying, for instance, to get together and agree on a certain breed; then for as many farmers as can use one sire to get together and purchase it. When this sire has been used long enough exchange with another similar group. This can be worked out for any class of livestock.

The community producing one kind of stock will have a good deal of that kind of stock, which makes the marketing easier, and will also bring better prices.

Wire Worms

C. B. Waldron

Many letters are coming in to the N. D. Experiment Station regarding the wire-worm.

The wire-worm which is the larval stage of a small black beetle is of a yellowish brown color with a shining surface and a diameter about equal to that of a wheat straw just below the head. Its length depends upon the age of the larva. It lives for three years in the ground in the larval stage. During the first season it attains a length of five-eighths of an inch and is light in color being almost white when first hatched from the egg and it gradually takes on a yellowish tinge. The second season they are still darker in color and somewhat larger in diameter. By the end of the second season they are nearly an inch in length. At the beginning of the third season they have changed but little in appearance being somewhat larger in size. During this season they go into the pupal stage emerging later on as beetles. The beetles select grass lands, or stubble lands that have lain barren for a year, in which to lay their eggs. The eggs hatch in the fall and the insect hibernates in the larval stage. If this land is put into any kind of a grain crop in the spring the wire worms will eat the germ out of the kernels just as they are sprouting. They are especially injurious in this manner to corn and wheat.

Some of the farmers this spring have complained of a complete destruction by wire-worms of the wheat that is grown on timothy sod. During the early part of the season the wire-worms keep within two or three inches of the surface of the soil or at the depth at which the grain is sown. After the first of June they go to a greater depth, feeding then upon the roots of the plants and doing comparatively little damage.

The question naturally arises as to what can be done to fields where corn or wheat has been destroyed. It has been found that late sown millet or barley does not suffer much from the wire-worm, even on land where wheat had been completely destroyed. This is in part due to the fact that the wire-worms are working deeper in the soil and possibly also to the further fact that they prefer wheat to barley and millet.

As the wire-worms are not disposed of in any one season it is equally important to know what to sow after the millet or barley is taken off. The land should then be plowed and put in shape for winter rye. This should be seeded during the latter part of August or as soon as the harvest is over. At that time the wire-worms are still deep down in the soil and are not likely to damage the crop materially. Where wire-worms are not too abundant potatoes have been considered a safe crop to grow but last year and the year before we received complaints of wire-worms having practically destroyed the potatoes by boring into them in the fall. They seem to be more active during the early spring and fall than thru midsummer season. There is no treatment of any kind that will diminish the number of wire-worms in the soil. The only way to do is to grow crops not affected by them and sow at a time of year when wire-worms are least apt to attack germinating seeds. It should also be kept in mind that grass or stubble land that has been allowed to become weedy and grassy is pretty sure to contain wire-worms if there are any in that part of the country. If the grain is looking poor it would be well to dig down 4 to 5 inches, carefully examining the soil for wire-worms.

COMBINING INGENUITY WITH CONCRETE

If the farmer would combine a little ingenuity with concrete he could make many useful things from a single unit or pattern, just as he could cut up a

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board for sundry purposes. The manufacture of concrete lumber of this type is a simple matter. Consider, for example, a simple concrete board or slab.

Some of the uses to which this cement lumber could be put are as follows:

If two of the boards were firmly planted in upright position and a third slab placed across the top, the farmer would have an everlasting stone bench.

Two of the boards planted longitudinally with a third board placed upon the top would make an excellent culvert or cover for a small drain.

By providing proper supports, whether of concrete or other convenient material, these slabs would serve as steps.

Laid upon the ground, one after another, they would make an excellent walk.

Planted at the sides of the garden walk they would keep the vegetable or flower beds in position. The walk between could be composed of a series of slabs.

If made sufficiently wide they could be utilized for the sides of a hot bed or cold frame.

Made a little thicker and stronger they would constitute an excellent pavement for a cellar, carriage-house or ground-level porch.

Another convenient type of concrete lumber is the small beam. In a box of required length could be cast 4 x 6-inch sections of concrete corresponding to timber of that dimension, or in larger size if desired. These would be re-inforced with three-eighth-inch rods, one in each corner. Four of these firmly planted would carry a large slab, thus making an indestructible, weatherproof table They would also be used for posts or supports.

For making boards or slabs the farmer should have a shallow box or form that will hold concrete to the depth of 2 or 3 inches. It may be of any desired length and width. A layer of concrete placed in the box to one-half the depth of the latter would be the first step in the manufacture of the board. Upon this would be placed a layer of woven wire and the box then filled to the top.

In brief, as stated, the farmer would have so much concrete lumber on hand, and if he were to exercise his ingenuity he would find many uses for it other than those described above. It would not be necessary in every case to purchase lumber for making forms for some types of construction. For example, there is the case of a builder who utilized some old kegs for making supports for a building, and in another instance several kegs were piled one upon the other to make a strong concrete column, the concrete subsequently being wrapped with wire and plastered to bring it into proper shape. Again, a man desiring a flower screen at a point where it was impossible to dig, merely divided an old store box into two compartments and placed therein some 5 inches of concrete. In the center of each block was imbedded, while the concrete was soft, a section of 2-inch pipe. The two timber supports for the flower screen were inserted in these pipes and proper cross pieces attached from top to bottom. After serving this purpose thruout the summer the supports came into play in other convenient ways, one of them being used as a base for a Christmas tree, and on another occasion it was called into service on the lawn as a support for a large sun-shade.

A mixture consisting of 1 part Portland cement, 2 parts clean, sharp sand and 4 parts crushed stone would make a strong and dense concrete.

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The concrete should be used at once after mixing and be given ample opportunity to cure thoroly, which would require from a week to ten days. In the meantime it should be kept out of the hot sun and wind and should be sprinkled daily. The forms in which slabs or posts are cast should have a simple locking device and hinges to facilitate removal after the concrete has set.

The purpose in adopting concrete rather than lumber would be to eliminate all outlay for renewals and repairs, such as are essential when wood is used. Time and exposure to the elements increase the strength of concrete and hence for the various devices specified it would serve the purpose as long as required.

PERCHERON SALES DURING PAST FIVE MONTHS

Wayne Dinsmore

In response to inquiries as to the Percheron trade during the past five months, the Percheron Society of America has compiled a summary of transfers entered of record between November 1st, 1913 and April 1st, 1914.

During this time 4935 transfer certificates were entered on the records. 1836 of these were for animals sold prior to November 1st, 1913. Of the 3099 remaining, which were for animals actually sold between November 1st, 1913 and April 1st, 1914, 1653 were for stallions and 1446 were for mares. This actual record (which is known to be incomplete) of sales made during the five months named, shows that the Percheron trade has been active. It is worthy of note that more sales have been made by small farmers and breeders than heretofore. Personal reports from a great many farmer breeders justify the conclusion that the prices obtained for American bred horses have been more satisfactory than in the past.

The rank of the fifteen leading states according to Percherons purchased between November 1st, 1913 and April 1st, 1914 follows:

	Stallions	Mares	Total
Illinois	315	399	714
Iowa	225	165	390
Indiana	189	81	270
Ohio	78	145	223
Kansas	90	107	197
Wisconsin	96	84	180
Minnesota	64	68	132
South Dakota	62	54	116
Nebraska	77	31	108
North Dakota	62	42	104
Missouri	51	50	101
Montana	50	25	75
New York	30	32	62
Pennsylvania	27	32	59
Oklahoma	37	20	57
Canada	88	14	102

Indiana has been especially active in the purchase of stallions, while Illinois, Ohio and Iowa, the oldest breeding states, have been heavy purchasers of mares. This is in accord with experience, for all well-informed horsemen know that increase in the breeding of good horses is most rapid in sections where Percherons have been used long enough to demonstrate their advantages over light horses in farm work.

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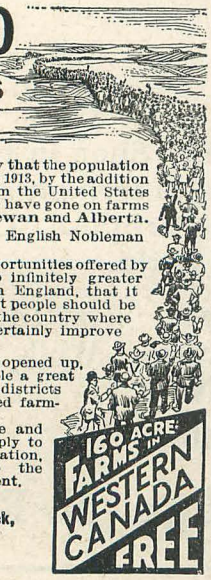

Immigration figures show that the population of Canada increased during 1913, by the addition of 400,000 new settlers from the United States and Europe. Most of these have gone on farms in **Manitoba, Saskatchewan** and **Alberta.**

Lord William Percy, an English Nobleman says;

"The possibilities and opportunities offered by the Canadian West are so infinitely greater than those which exist in England, that it seems absurd to think that people should be impeded from coming to the country where they can most easily and certainly improve their position."

New districts are being opened up, which will make accessible a great number of homesteads in districts especially adapted to mixed farming and grain raising.

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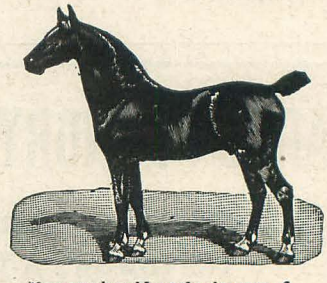

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From the Nation's Capital

Richard Hamilton Byrd

INTERVIEW WITH NEW ASSISTANT SECRETARY OF AGRICULTURE

Merit and experience and scientific training have received recognition again in the selection of William A. Taylor, the present chief of the Bureau of Plant Industry, Department of Agriculture, to succeed Dr. Galloway as assistant secretary of that Department. Mr. Taylor is more a real farmer and in the eighties was raising fine peaches in Michigan.

"During the 20 or more years that I have been connected with the Department of Agriculture," said Mr. Taylor, "there have been vast changes at the Department, not only in the work that is being done for the benefit of the farmer, but also in the physical growth of the various bureaus. No one can estimate how large the Department of Agriculture will be eventually. It is a most important branch of the Government, for you know people must eat and it is the farmer who must fill the bread basket. Our people are not eating any more today than they did when I entered the Department, but there are more of them and they are more discriminating. Recognizing that fact the Bureau of Plant Industry has its men searching every corner of the globe for new varieties of plants, vegetables. fruits, cereals and grasses."

"What would you say have been some of the more important achievements of the Bureau of Plant Industry since you have been at its head, Mr. Taylor?"

"There has been no one line of work of the Bureau that may be considered as standing out by itself, for our work is so interwoven, but I may say that I believe the Farm Demonstration Work to be one of vast importance to the farmer, for by it he can see for himself just what modern methods of farming as evolved by the agricultural scientists will mean to him in a dollars and cents way—he can see for himself what he can gain for his pocketbook by casting aside the practices of his father and his father's father and adopting farming methods of this century. But this work was not started during my administration as chief, rather before it, during the time that Dr. Galloway, then chief of the Bureau was ill and traveling abroad and I was acting in his place. Little progress was then made, but the movement was given a strong impetus when he returned to his post.

"In fact, much of the progress of the Department of Agriculture may be credited to Dr. Galloway. As assistant secretary of agriculture he has really made that position the scientific head of the Department, hence

I have felt some trepidation in accepting the offer to succeed him. I shall not, in fact, take charge all at once, but the turning over of his office to me will be one of gradual assimilation, so that when the time comes when it will be necessary for Dr. Galloway to assume his post as dean of the Cornell Agricultural College, I hope to be able to have a grasp of the various problems just where he relinquishes them and to push them until the desired ends are accomplished.

"Probably the most important subject that I will be required to handle as assistant secretary will be that of the administration of the Smith-Lever Agricultural Extension Law. Our relations with the several states must be adjusted and in such a way that the Government will be satisfied, the states satisfied, and the farmer, himself, satisfied. This is probably the most important piece of legislation affecting agricultural interests since the passage of the Hatch law under which the various state agricultural experiment stations now operate."

The Department of Labor is now in receipt of requisitions for 85,000 men to go to Oklahoma, Kansas, and Missouri to help harvest the wheat crop. Secretary Wilson received a telegram from Labor Commissioner Fitzpatrick, of Missouri, stating it will require 30,000 men to handle the wheat crop in Missouri, and that early harvest will begin about June 15, and should the drought continue harvest will begin earlier. The telegram states that wages, from $2 to $3.50 a day, will be paid and that the period of employment will be from three to five or six months. It is believed at the Labor Department that requests will soon come for men from the wheat-growing states of Minnesota and North and South Dakota.

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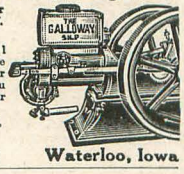

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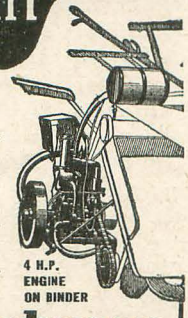

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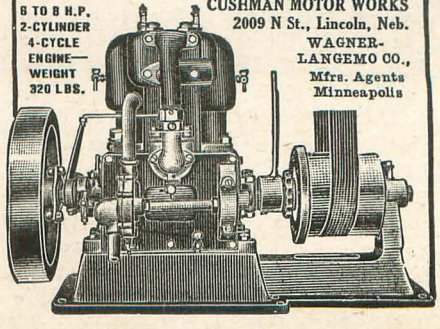

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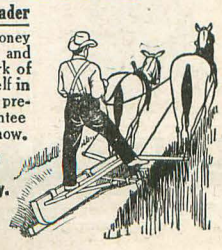

value of his progeny. Such a bull, used on a common herd, should easily increase the average production by his progeny 1,000 pounds of milk or 40 pounds of fat per cow per year over that of their dams. One Holstein-Freisian bull used in the Ohio Experiment Station herd increased the average production of his 7 daughters 1,299 pounds of milk and 40 pounds of butterfat per year above that of their dams. Forty pounds of fat per year for 6 years (average producing period) by each of 7 cows would be 1,680 pounds of fat—1,680 pounds of fat at 30 cents a pound equals $504. This animal cost $100 when a calf. One Jersey used in the same herd decreased the average production of his 11 daughters over 700 pounds of milk and over 45 pounds of butterfat per year below that of their dams. Forty-five pounds of fat per year for 6 years by each of 11 cows would be 2,970 pounds, which at 30 cents per pound would equal $891. The immediate difference in money value of these two bulls on these herds of less than 20 cows each was $1,395. Both bulls had an equally good chance to increase the production. The figures given above take no account of the advantageous or detrimental effect on the progeny of these daughters.

Railroads Fined Again

The railroads, the enemies of farmers in many sections of the country, or at least so considered, have fallen under the ban of the Department of Agriculture. A number of roads have been fined $2,450 and costs for the violation of the livestock quarantine law and the 28-hour law; and various individuals have suffered penalties for the violation of the meat inspection law. Of the railroads, the Atlantic Coast Line suffered the largest total fine. A penalty of $100 and costs was imposed on this road in each of eight cases for violation of the livestock quarantine law.

A notice has been issued by the Department of Agriculture calling attention to a proposed amendment in the Federal regulations for the protection of birds, permitting the shooting of reed or rice birds in September and October in the states of New Jersey, Pennsylvania, and Delaware, Maryland, the District of Columbia, Virginia and South Carolina. The effect of this change will be not extend to sportsmen in New Jersey, Pennsylvania, and Delaware the privilege of shooting the birds during a period of two months, a privilege now enjoyed in the other states mentioned. As the season is so short it is not believed that the birds will suffer appreciably in numbers.

Injury from Lime-Sulphur Spray

The Office of Experiment Stations of the Department of Agriculture has received a report conducted by the Oregon Station to determine what chemical ingredients of the lime-sulphur spray can be classed as injurious in a strict sense. A series of experiments was conducted in which the various materials which go to make up the spray and the compounds which are liable to occur in the spray before and after its application were used. These were sprayed on potato and bean foliage as well as on the foliage of apples, pears, cherries, peaches, and plums. Considerable varietal susceptibility to lime-sulphur was noted, but it was found that the injury, in the proper use of the term was caused by chemicals known as calcium polysulphids and calcium thiosulphate. The other normal ingredients occurring in the lime-sulphur mixture, either before or after its application, were found to be harmless.

It was further found that the specific gravity alone of the lime-sulphur spray does not indicate to what extent sulphids are in solution and that different experiments using solutions of different densities could determine nothing.

In an investigation made of means for the prevention of lime-sulphur injury it was found that it could be prevented to some extent by a considerable dilution of the solution or by the use of substances that would render the sulphids insoluble. Among those tested were iron, copper, and zinc sulphates, sulphuric acid, and carbon dioxid. It was concluded that self-boiled lime sulphur is a mixture rather than a combination of lime and sulphur, and that much of the injury attributed to lime-sulphur sprays are due to other causes, particularly to sunburn.

Warning Against Hog Cholera Cures

The Department of Agriculture has received evidence of what appears to be a well-organized campaign to delude farmers thruout the country into buying an alleged cure for hog cholera, under the impression that this has been investigated and approved by the Government. Articles praising this medicine, Benetol by name, are being sent out widespread to newspapers. These articles are so worded that it appears as if the Department of Agriculture had received reports from the State of Minnesota showing that the medicine had proved most beneficial.

Buy Now Direct From Factory

Don't wait until too late—Send your order today for Silo to be shipped to **your station on approval.** Have your material ready and put up your Silo before the harvest work begins.

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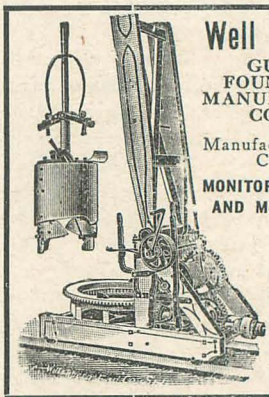

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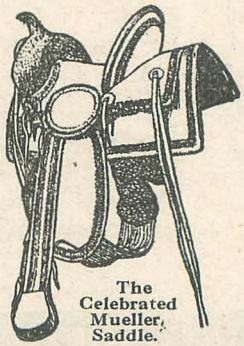
A $45 Saddle, $32 Cash



The Celebrated Mueller Saddle.

Our latest Swell Fork Saddle, 14-inch swell front, 28-in. wool-lined skirt, 3-in. stirrup leather, ¾ rig, made of best oak leather, guaranteed for ten years; beef hide covered solid steel fork.

THE FRED MUELLER
Saddle & Harness Co., Dept. R, 1413-15-17-19 Larimer St. Denver, Colo. Send in your name for our catalogue now ready.

BIG MONEY in the OFF SEASON

One Man can run it.

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Improved Powers Boring and Drilling Machine. Bores a well 100 ft. deep in 10 hours. One man can run it; a team operates it and easily moves it over any road. Bores everything except hard rock, and it drills that. No tower or staking; rotates its own drill. Easy terms; write for catalog.

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MAKE BIG MONEY drilling wells. Steady demand. Our machines make deep or shallow wells of all kinds in all kinds of soil. Fast workers and easily operated. Most improved in every way. Write for our free catalog.

R. R. HOWELL & COMPANY, *Manufacturers,* **MINNEAPOLIS, MINN.**

The Department has no reason to believe in the efficiency of any proprietary cure for hog cholera and does not recommend any. Under certain conditions it urges farmers to protect their stock with anti-hog cholera serum, but that is all.

The statement is made by the Department that this same medicine which is now advertised as good for hogs, was advertised some time ago as a means of killing tuberculosis, typhoid, and cancer germs, according to an article published in the Journal of the American Medical Association. At that time it was asserted that the Army was interested in it—interested about as much as the Department of Agriculture is interested in it now. All hog owners are warned to communicate with the United States authorities before accepting as true any statement that the Government recommends any treatment other than the serum already mentioned.

The approximate average increase in height or weight of various growing animals during the first 6 months has been estimated by scientists to be as follows: Fourteen-hand horse, one-half inch per week in height at withers; cattle 2 pounds daily; sheep, goat, and pig 8 ounces and 12 ounces daily, respectively; St. Bernard dog 8 ounces daily, field spaniel 2 ounces, Scottish terrier 1 ounce, toy spaniel three-fourths ounce; cat, rather more than one-half ounce per day; rabbit, large varieties three-fourths ounce, small varieties one-half ounce daily; guinea pig one and one-half ounce per week up to 4 months old, when growth slackens; fowl one-half ounce per day, more or less according to breed; duck three-fourths ounce per day; and pigeon, nearly one-third ounce daily during the first month.

QUARANTINE AGAINST MAINE POTATOES

A quarantine against Maine potatoes, effective August 1, 1914, has been declared by the Department of Agriculture, on account of the prevalence of powdery scab in that State, particularly in Aroostook County. After August 1, no common or Irish potatoes can be moved out of Maine except under regulations which the Department will publish shortly. Pow Department will publish shortly. Powdery scab has been prevalent for some time among Maine potatoes, but the state authorities have been responsible for preventing the spread of the disease. With the enforcement of the new quarantine, the Federal government will take charge of the work.

MENTION

The N. D. F. When

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It will help YOU, the ADVERTISER and those who publish the North Dakota Farmer.

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Send us samples of any high grade grass seed or seed grain you have for sale, and we will make bid on same F. O. B. your station. WRITE US TODAY.

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Are you interested in North Dakota grown seed corn? We have the finest lot ever offered for sale in North Dakota. It is of high germination test, thoroly acclimated and the earliest varieties known.

MARQUIS WHEAT

We have a quantity of this prize-winning, Canadian grown grain.

MACARONI (DURUM) WHEAT

A fine lot of this seed constantly on hand for immediate shipment in small quantities or in car lots.

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We keep on hand a good supply of Early Fortune and Broom Corn Millet. Also southern grown hay millet.

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North Dakota Farmer

Entered as second class matter in the postoffice a Lisbon, North Dakota

PUBLISHED EVERY MONTH

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PROF. J. H. SHEPPERD, State Farm Notes.
PROF. W. B. RICHARDS, Livestock.
PROF. C. B. WALDRON, Fruits, Forestry, Insect pests.
GEO. HAUSMANN, Poultry.

Remittances should be made by Draft, Postoffice Order or Express Order.

Address all business correspondence to the Lisbon office.

Vol. 15 JUNE, 1914 No. 12

"The country landlord lives in town on the sweat of another man's brow and in turn is sweated by the city landlord."

Land will be worth $100 per acre just as soon as good farming will result in a net profit of $7.00 per acre every year.

Silos are becoming more numerous and wherever one looms against the sky the atmosphere of prosperity seems to abound on that farm.

Everybody is praying for a big crop this year of grace 1914, which only demonstrates that the farmer is the back-bone of the state's prosperity.

Burning straw to get rid of it is, or should be considered, a crime. No man has a moral right to give to the air what God intended should be given to the soil.

Land never reaches top value in a country where the roads are neglected. Good roads, on the other hand, enhance the value of the farms far in excess of their cost.

Why is it considered laudable and legitimate to lie and slander, to libel and crucify a man's character in order to make votes for the other fellow? Yet society winks at such tactics because it is politics. Isn't it about time to clean up?

The time to practice dry farming is when it is so wet that moisture may be stored up in the soil and not when there is no moisture to conserve. Many farmers "cuss" the excessive rain when they should be damming it up in the subsoil.

Agriculture embraces chemistry, biology, physics, bacteriology, etc., that is, God's deepest mysteries yet undiscovered together with what is already imperfectly understood. The farmer, therefore, has much yet to learn and the willing ones will be richer and happier for what they do learn.

Too many otherwise sensible farmers object to being taught. This is a mistake, as often on the part of teacher, however, as of the farmer, for a good deal depends upon the manner in which the advisor approaches his task. Farmers as a rule will listen to good suggestions and conscience knows there is much to be learned by the most experienced farmers,—as well as instructors.

The tenant system of farming is bad for any agricultural state. The renter seldom takes much interest in maintaining the fertility of the soil or keeping it clear of weeds. As a result the tenant causes the country to deteriorate. But where the land is owned by the man managing the farm it is different. Every improvement, even to the planting of trees, improves the country by making the farms more presentable as well as well as more valuable. The glory of this state will be reflected more by the moderate sized intensively cultivated farms than by the bonanza, extensively cultivated farms.

The Smith-Lever bill is now a law and North Dakota profits by its provisions to the extent of $10,000 annually without any consideration, with an increase of about $6000 each year for eight years, when the Federal appropriation of approximately $52,000 annually will remain stationary. The state must provide an equal amount, with the exception of the $10,000 which is appropriated annually without any consideration.

This money must be used almost exclusively for extension work, such as tht Better Farming Association, which places the same under the exclusive control of the state and general government instead of under the control of banks and other corporations as heretofore.

The objection to using Mr. Rockefeller's money to pay salaries of men working in the Department of Agriculture was not so much on account of its tainted character as the apparent disposition to use it to entrench the "money power" more firmly in this country. Money is a good thing, but it is not everything. And when men capture more than their share of the country's wealth by foul as well as by fair means, they must not become domineering and arrogate to themselves the authority to control the industrial and educational affairs of the country. The people will not stand for it. It is more than enough to permit the natural resources of the country to be monopolized without permitting the monopolies to rule with a rod of iron.

When the farmer makes his "pile" he should improve his farmstead until he has every urban convenience instead of moving to town in order to enjoy them. There is no place like the country for country people, and with modern conveniences such as hot water heat, pressure and septic tank, and electric lights and power, all of which can be had on the farm as cheaply as in town, the farmer's declining years should be happier on the farm where he made his money than in town where at best he will be more or less a stranger.

In the days of our grandfathers there were few if any hen-houses on the farm. As a rule, the hens were compelled to roost on tree tops, shed roofs, wagons, plow handles, etc. How different are matters today! Not only do we provide warm and comfortable houses, but have added scratching sheds to induce fowls to take the same exercise during bad weather that they would naturally take on a free range on bright, sunny days. The scratching sheds are a great improvement over the free range practice. While the ground is frozen hard, and the winds are piercing, the free range fowls must hunt fence corners, and the sunny sides of buildings, to keep warm. They cannot exercise, for every inch ground is as hard as a rock. There is no inducement for them to forage, as the green blades of grass have been killed, the worms have sought their winter quarters, and the gravel—grit—is fairly glued to mother earth. They, therefore, can do nothing but lounge around to keep warm, from which position they only change to feed on corn, or go to roost. That was the exact condition of the fowls of our grandfathers' days (back in the 50's). Layer after layer of fat, and no eggs, was the verdict.

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The products advertised below are in compliance with the pure food law of North Dakota and of the highest grade. ASK YOUR GROCER FOR THEM.

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HOME BRAND

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A GUARANTY OF PURITY. A WELCOME GUEST at every table where the HOUSEWIFE demands the BEST. THE MONARCH LABEL insures QUALITY in Coffee, Catsup, Pickles, Maple Syrup, Canned Goods or any article bearing the MONARCH BRAND of REID MURDOCH & CO CHICAGO.

DR. PRICE'S JELLY DESSERT

NUTRITIOUS-WHOLESOME

One package, 10 cents, makes one pint of wholesome Fruit Jelly. All flavors from true fruits.

PURE FOOD PRODUCTS

ONLY

THIS SPACE FOR SALE

Livestock Department

FARM AND STOCK NOTES

N. J. Shepherd

Having things convenient saves time and labor.

In pruning wounds heal more rapidly in the spring.

The churn furnishes final evidence of the butter a cow produces.

The butterfat that goes to waste eats up the profits.

Never head fruit trees so low as to interfere with cultivation.

Combinations and co-operations greatly lessen the cost of production and distribution.

The hog that is kept growing is always finished for market most easily.

A good horse of any class is the product of good breeding and good feeding.

Always cover all large wounds made in pruning with wax or paint.

The older the pig, the more it costs per pound to put on flesh.

Half the success with livestock consists in having a regular time for attending to them.

When cream or butter only is sold, dairying and pig or poultry raising are good combinations.

When a sheep is thriving wool grows rapidly; when a sheep is declining the wool growth is checked.

Feed sold from the farm in the form of butterfat and pork brings the best profit.

The best of horses will never bring their real worth in market unless in good flesh.

The joints of a growing colt are soft and may easily be deformed and blemished by being strained.

A good growth the first year of the life of the colt costs less than at any other age.

A sow which is gaining rapidly in flesh just before breeding is more likely to produce a large healthy litter.

A good draft horse is a good farm horse either to wear out in the field or to sell when mature.

The horse that lacks action, strength or endurance is curtailed in value no matter how stylish he may be.

Any cause that tends to lower the vitality of the hog also tends to render it susceptible to disease.

The cornerstone of good farming is rotation of crops, saving of manure, sheltering of stock and economy of feeding.

Sheep are about the only animals that do not exhaust the land upon which they feed, but permanently improve it.

The horse that has a long stride has a low-down knee and he moves with more ease than one with a high knee.

There is no better way to stiffen up a horse than to have him stand on a plank floor when not at work.

The sheep is a close gleaner with the faculty of gaining his sustenance from grain and herbage that often otherwise would be lost.

With all kinds of trees cut off dead branches as soon as discovered and cover the wound with paint to prevent further decay.

Low strong trees are better than those that are tall and slender; they will carry a heavier burden and the fruit is more easily reached.

Any farmer who has a large orchard and does not keep a flock of fowls upon it is wasting valuable space which could profitably be utilized to advantage.

The true value of farming land should be measured by the interest which it earns on a given amount without receiving its fertility and after all expenses are taken from its gross annual product.

Keep the sow as long as she can produce and take care of a good litter of pigs, as she is less trouble and will return a greater profit to her owner than a young gilt.

Pruning trees while they are dormant stimulates the growth, while pruning in June and July checks the growth and causes the formation of fruit buds. Summer pruning helps to thin the fruit, opens the top to let in the air and sunshine which helps to color the fruit.

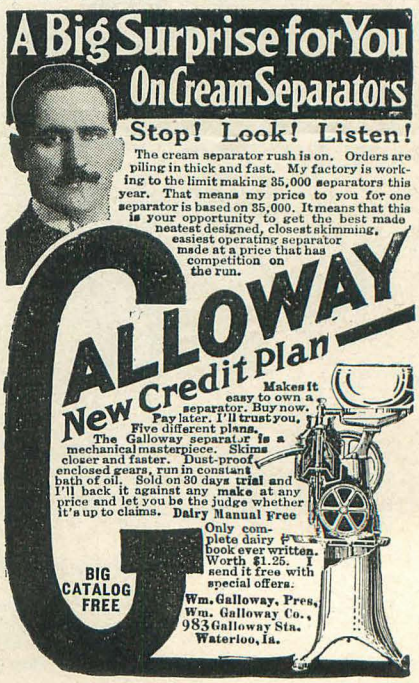
PERCHERON BREEDING IN NORTH DAKOTA

Wayne Dinsmore

North Dakota stands within the first twelve in the United States in the production of Percherons. June 1st, 1913 there were 144 members of the Percheron Society of America in North Dakota. 9754 animals were recorded by the Percheron Society during the fiscal year ending October 31st, 1913. 7819 of these were American bred animals. North Dakota contributed 203 of the American bred animals and 7 of the imported animals which were recorded during the time mentioned.

A critical analysis of Percheron breeding in North Dakota by counties, shows that LaMoure County stands first with 7 members and the registration of 26 horses during the fiscal year ending October 31st, 1913. Other counties with number of members and number of horses recorded follows:

Barnes County second in state, 10 members, 13 horses recorded.



Towner County, third in state, 8 members, 14 horses recorded.

Bottineau County, fourth in state, 4 members, 12 horses recorded.

Dickey County, fifth in state, 8 members, 12 horses recorded.

Griggs County, sixth in state, 9 members, 10 horses recorded.

In general most of the Percheron breeding is centered in the eastern part of the state, altho one county, Williams in the extreme western part of the state has made considerable headway in the breeding of Percherons.

It is a matter of note that horses bred and reared in North Dakota are usually of exceptional quality in feet and legs. The high altitude, dry atmosphere and hard prairie sod, appear to be conducive to the development of good underpinning and while a good many of the Percherons and grade Percherons produced in the state have lacked somewhat in size, this is due chiefly to a failure to feed liberally during the first three years of the horse's life.

The state is fortunate in possessing more than 150 members of the Percheron Society of America who are actually engaged in the production of Percheron horses and there is no reason to believe but that some of the best Percherons in the United States can be produced here as soon as the breeders, generally, adopt the plan of feeding their colts liberally from birth to maturity.

SILAGE AN EXCELLENT FEED FOR DAIRY CATTLE

Silage is the main reliance of dairy farmers in many sections for cow feed, since it has been found to be particularly well adapted as feed in this connection, is the statement contained in Farmers Bulletin 578, United States Department of Agriculture. While silage is an excellent feed for dairy stock, it should be combined with some other leguminous feed, such as clover, cow peas, or alfalfa, owing to its insufficient productive quality.

The leguminous material will tend to correct the deficiencies of the silage in dry matter, protein, and mineral constituents. A ration of silage and, say, alfalfa hay alone, is satisfactory, however, only for cows which are dry or giving only a small amount of milk and for heifers and bulls. Cows in full milk require some concentrated feed in addition to hay and silage, as they can not consume enough of these feeds to keep up a large flow of milk and maintain body weight.

The amount of silage to feed a cow will depend upon the capacity of the animal to consume feed. She should be fed as much as she will clean up without waste when consumed along with her hay and grain. Raise or lower the amount until the proper quantity is ascertained. Generally speaking, a good cow should be fed just short of the limit of her appetite. If she refuses any of her feed it should be reduced at once. The small breeds will eat 25 or 30 pounds per day; the large breeds 40 or more; and the medium-sized ones amounts varying between.

Ironclad directions for feeding cows can not be given. In general, however, they should be supplied with all the roughage they will clean up with grain in proportion to butterfat produced. The hay will ordinarily range between 5 and 12 pounds per cow per day when fed in connection with silage. For Holsteins 1 pound of concentrates for each 4 pounds of milk produced will prove about right. For Jerseys 1 pound for each 3 pounds of milk or less will come nearer meeting the requirements. The grain for other breeds will vary between these two according to the quality of milk produced. A good rule is to feed seven times as much grain as there is butterfat produced.

The following rations will be found good:

For a 1,300-pound cow yielding 40 pounds of milk testing 3.5 per cent:

	Pounds
Silage	40
Clover, cowpea, or alfalfa hay	10
Grain mixture	10

For the same cow yielding 20 pounds of 3.5 per cent milk:

	Pounds
Silage	40
Clover, cowpea, or alfalfa hay	5
Grain mixture	5

For a 900-pound cow yielding 30 pounds of 5 per cent milk:

	Pounds
Silage	30
Clover, cowpea, or alfalfa hay	10
Grain mixture	11

For the same cow yielding 15 pounds of 5 per cent milk:

	Pounds
Silage	30
Clover, cowpea, or alfalfa hay	8
Grain mixture	5

A good grain mixture to be used in a ration which includes silage and some sort of leguminous hay is composed of:

	Parts
Corn chop	4
Wheat bran	2

CLASSIFIED ADS.

One Cent a Word

Small advertisements will be classified under appropriate headings at the low price of one cent a word for each insertion. Cash must accompany all orders. Each initial or number must count as one word. TRY IT HERE.

LIVE STOCK

POLAND CHINA PIGS, also Shropshire sheep Seed grain GEO. N. SMITH, Amenia, N. D.

FAMOUS O. S. C. SWINE. Am now booking orders for fine pigs of April farrow. Price: $18 each; $35 a pair. All Stock recorded free. Shipping point: Mankato.
ROBT. A. HAEDT, Eagle Lake, Minn.

ASH GROVE FARM. Knudtson & Son, Props.
Breeders of Pure Bred Percheron Horses and Short Horn Cattle, Both Sexes. Stock for Sale.
Route 1 Fullerton, N. D.

J. S. BIXBY
RED POLL CATTLE. If you want dual-purpose cattle, I have the best. Rhode Island Reds, also in stock. **LISBON NORTH DAKOTA**

Mulefoot Hogs are Healthy, Hardy and Prolific.
Jno. Dunlap, Breeder, Williamsport, Ohio.

REGISTERED HOLSTEIN HEIFERS
We offer for sale a few registered heifers from 16 months to two years old. Good Individuals of excellent A. R. O. ancestry. Tuberculin tested. If interested write for breeding and prices.
BROWN & CASSELL, - - Ho5e, N. D.

SHORT HORNS
Young stock for sale. All registered.
Jim Uglum, - - - Bowbells, N. D.

Maple Lodge Large Registered Yorkshire Pigs, $9 to $12. Sired by Egeland Valliant weight 600 pounds.
Bourbon Red Turkeys.....$1.75 to $3.
Partridge Wyandottes, Eggs and Stock....$1.50
Good Winter Layers **All Stock Guaranteed**
EDWARD KLEBAUM, - Egeland, N. D.

REGISTERED POLLED SHORTHORN CATTLE AND BOURBON RED TURKEYS.
Some good young Bulls for Sale.
Odessa Stock Farm, - Devils Lake, N. D.

Meadowlawn Farm. The largest breeders in North Dakota. Percheron Horses, Shorthorn Cattle, and Berkshire Hogs. Where quality counts. Address:
A. H. WHITE, - - - Kramer, N. D.

For Large Yorkshires of either sex and bred gilts, address **L. A. Knoke, Badger Den Stock Farm, Willow City, N. D.**

Choice Poland China Hogs always on hand. Bred Gilts all sold, Register now for spring pigs, either sex; prices right. **Thos. Forbes, Petersburg, N. D.**

HIGHGRADELIVESTOCK: Clydesdales, Double-standard Polled Durhams. Farm Horses and Drivers.
Leal Stock Farm, - - Leal N. D.

PERCHERONS FOR SALE

We are offering a choice lot of young mares and stallions, all raised here on the farm and thoroly acclimated.
WHITE BROTHERS
Valley City - - - - North Dakota

Purebred Registered
HOLSTEIN CATTLE
The Greatest Dairy Breed
Send for FREE Illustrated Book
Holstein-Friesian Asso., Box 135 Brattleboro, Vt.

ENVILLA STOCK FARM

Envilla Stock Farm, Cogswell, N. D. will quote you special prices on Angus Cattle, Shetland Ponies, Duroc Jersey Hogs, Wolf Hounds, Collies, Rat Dogs and other breeds, Angora Cats. All varieties of chickens; turkeys, geese, ducks, guineas, pheasants, rabbits, ferrits. Pets. Live Foxes, Skunks, Mink and Badgers

MISCELLANEOUS

WANTED. Live Foxes, Skunks. Mink and Badgers, any time.
Envilla Stock Farm, - - Cogswell, N. D.

TWO GIRLS to do house work.
Grosvenor Farm, - - Casselton, N. DaK.

Linseed-oil meal or cottonseed meal..... 1

In case the hay used is not of this kind some of the corn chop may be replaced by linseed or cottonseed meal. In many instances brewers' dried grains or crushed oats may be profitably substituted for the bran, and oftentimes gluten products can be used to advantage in place of bran or oil meals.

The time to feed silage is directly after milking or at least several hours before milking. If fed immediately before milking the silage odors may pass thru the cow's body into the milk. Besides, the milk may receive some taints directly from the stable air. On the other hand, if feeding is done subsequent to milking, the volatile silage odors will have been thrown off before the next milking hour. Silage is usually fed twice a day.

Calves may be fed silage as soon as they are old enough to eat it. It is perhaps of greater importance that the silage be free from mold or decay when given to calves than when given to mature stock. They may be given all the silage they will eat up clean at all times. Yearling calves will consume about one-half as much as mature stock; that is, from 15 to 20 or more pounds a day. When supplemented with some good leguminous hay, little, if any, grain will be required to keep the calves in a thrifty, growing condition.

One of the most trying seasons of the year for the dairy cow is the latter part of summer and early fall. At this season the pastures are often short or dried up, and in such cases it is a common mistake of dairymen to let their cows drop off in flow of milk thru lack of feed. Later they find it impossible to restore the milk flow, no matter how the cows are fed. Good dairy practice demands that the milk flow be maintained at a high level all the time from parturition to drying off. It becomes necessary, therefore, to supply some feed to take the place of the grass. The easiest way to do this is by means of silage. Silage is cheaper and decidedly more convenient to use than soiling crops.

The amounts to feed will depend upon the condition of the pastures, varying all the way from 10 pounds to a full winter feed of 40 pounds. It should be remembered in this connection that silage contains a low percentage of protein, so that the greater the amount of silage fed the greater must be the amount of protein in the supplementary feeds to properly balance the ration.

METHODS TO CONTROL BLIND STAGGERS, WHICH IS CAUSING THE DEATH OF THOUSANDS OF HORSES

Investigators have practically established that this horse disease can be controlled effectively only by a total change of feed and forage. It is quite obvious that there is a direct connection between the green forage, exposed pasturage and newly-cut hay or fodder which the horses eat, and this Cerebro-spinal Meningitis, as the disease is known to scientists. In fact, eating of such forage when contaminated is undoubtedly the most important cause. Over 95 per cent of cases of this disease in Kansas and Nebraska during the outbreak of 1912 were maintained under such conditions.

Great care must be taken that horses do not obtain the dangerous forage unknown to their owners. The owner of one farm informed the Department's investigator that his dead horses had eaten nothing but good hay and grain.

"But what about the closely-cropped grass in this pasture?" remarked the investigator, noticing the adjacent field.

"Oh!" answered the farmer innocently. "I always turn the work-horses into pasture over night."

Many horses have died from blind staggers caused by eating moldy baled hay. As soon as the hay was eliminated the disease ceased. Other horses in the vicinity not fed upon this hay failed to contract this disease. Later some of the moldy bales were opened and exposed to the sun for three or four weeks. After this the hay was fed to horses without producing any ill effect. Forage poisoning, therefore, seems not to be an infection but rather what is called "auto-intoxication"—that is, it is due to certain chemical poisons or toxins formed by the activity of internal organisms. These poisons may be present when the forage is taken into the body or may be formed in the stomach. The nature of this poison is still unknown.

Characteristic Symptoms of This Disease

When the horse is taken with the blind staggers it usually exhibits a disturbance of the appetite, depression and weakness, while there is trouble in swallowing, drooping of the head and sleepiness which may give way to excitement and attacks of dizziness. The vision is impaired, which results in the staggering gait that gives the disease its popular name. Certain muscles of the neck and flanks are cramped and there is a grinding of the teeth. Sometimes the animal has pains as tho it were afflicted with colic. The animal will walk strangely if in an open space and will try to push thru any obstacle it encounters. In the stable he will press his head against the stall or rest it on the manger. Sometimes he will crowd into a corner. The temperature at the beginning of the disease ranges from 103 to 107 degrees F. but within 24 hours the temperature falls and eventually becomes subnormal. The animal is often down on the second or third day and may or may not get up when urged. Death usually occurs in from four to eight days, altho death may follow within ten hours of the first symptoms, while

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chronic cases have been known to last for three weeks. About 90 per cent of the affected animals die.

Medical Treatment Generally Unsatisfactory

While medical treatment in the vast majority of cases has not brought results, nevertheless if it is used at all it must be prompt and before the disease has had time to run. The digestive tract should be cleaned out thoroly at once. Active and concentrated remedies should be given. Afflicted animals, however, have great difficulty in swallowing immediately after being taken, so that these remedies must generally be given by injection. Arecolin in one-half grain doses, subcutaneously, has given good results as a purgative. Early in the disease urotropin in doses of 25 grains dissolved in water and given by the mouth every 2 hours, appears to have been responsible for the recovery of some cases of the malady.

After the animal has been purged, the treatment varies according to the symptoms. The following measures have been recommended:

The first and most important: Feed only clean well-cured forage and grain, and pure water.

Calomel, salol, and salicylic acid, to disinfect intestines.

Mild antiseptic mouth-washes are advisable.

Copious cold-water injections, if the temperature is high, give better results than antipyretics.

An ice pack applied to the head is beneficial in the case of marked nervous disorder.

One-ounce doses of chloral hydrate per rectum should be given if the patient is violent or muscular spasms are severe.

If the temperature becomes subnormal, the animal should be warmly blanketed.

If much weakness is shown this should be combated with stimulants, such as strychnine, camphor, alcohol, atropin, or aromatic spirits of ammonia.

During convalescence the usual tonic treatment is recommended.

The Department of Agriculture's bulletin (No. 65) is entitled "Cerebrospinal Meningitis (Forage Poisoning)", and may be had on application to the Department of Agriculture, Washington, D. C.

THE COST OF RAISING A DAIRY COW

According to investigators in the Department of Agriculture the average net cost of raising a dairy heifer one year old on a Wisconsin farm is $39.52 and of a two-year heifer $61.41. These figures are applicable to other districts in the North and East where land and feed values are similar to those in Wisconsin. They are based on data obtained from raising 117 calves from birth to the time they enter the dairy herd. The details, with a complete summary of the investigation, have recently been published by the Department of Agriculture in Bulletin No. 49, under the title of "The Cost of Raising a Dairy Cow."

There are in the United States over 21,000,000 dairy cows. These figures give some idea of the importance of this economic problem to the country as a whole, for these cows must be replaced every few years. The cost of the production of these heifers is a large item in keeping down the profits of the dairymen.

The new bulletin contains numerous tables and several illustrations of the Jersey calves from which the items of cost were obtained.

The most important item was the cost of the food, which was estimated at market value and amounted to nearly two-thirds of the total net cost of the heifer, while labor formed twelve and one-half per cent of the cost.

Figures for the average net cost of the one-year-old heifer are as follows:

Feed	$24.67
Labor	4.45
Other Costs	6.36
Total	$35.48

To this should be added the initial value of the calf, which was estimated to be $7.04, making a total cost at the end of one year of $42.52. This charge is justified in view of the fact that dairy cows are credited with this

ST. PAUL UNION STOCKYARDS COMPANY, SOUTH ST. PAUL, MINN.

Comparison of Receipts and Shipments of Livestock for May, 1914.

Receipts

Railroads	Cattle	Calves	Hogs	Sheep	Horses	Total Cars
C. R. I. & P.	330	227	1105	.....	1	34
C. G. W.	1259	705	5273	1147	50	155
C. M. & St. P.	3928	1263	19672	11567	23	504
M. & St. L.	2505	923	12691	484	9	308
C.,St.P.,M.&O.	3105	1468	18900	149	96	428
C. B. & Q.	253	82	1494	2	.....	32
M.St.P.&S.S.M.	3623	2894	19396	189	27	442
Gt. Nor.	6174	4123	35191	1681	42	800
Nor. Pac.	3072	1221	13819	4463	179	327
St.P.B.& T.	.....	.....	.....	.....	.....	.....
Driven In.	1035	134	1421	81	13	.....
Total	25284	13040	128962	19763	440	3030
Inc. over 1913	3247	1039	20682	8752	.....	441
Decrease	.....	.....	.....	.....	9	.....
Jan. 1 to date	144712	50790	620099	195036	2287	15694
Inc. over 1913	13232	2	116316	60891	196	2412
Decrease	.....	.....	.....	.....	.....	.....
Average Wts.	769	237	232	92	.....	.....

Note:—April 1914 report—C. M. & St. Paul total cars received should read 387 instead of 487.

C. St. P. M. & O. total cars received should read 391 instead of 291.

Shipments

C. R. I. & P.	299	63	.....	.....	10	15
C. G. W.	1683	148	347	99	3	72
C.M.&St.P.	5956	747	18143	5934	29	413
M. & St. L.	398	2	.....	42	.....	16
C.,St.P.,M.& O.	3951	1408	860	141	70	147
C. B. & Q.	1198	2	11005	2429	169	171
M. St.P.&S.S.M.	1949	239	74	10135	37	105
Gt. Nor.	2340	367	.....	109	33	84
Nor. Pac.	2142	164	87	711	7	79
St. P. B. & T.	.....	.....	.....	.....	.....	.....
Driven Out.	459	213	245	75	68	.....
Total	20375	3353	30761	19675	426	1102
Inc. over 1913	4819	.....	4561	11639	.....	269
Decrease	.....	216	.....	.....	14	.....
Jan. 1 to date	92666	12053	167473	140623	2295	5528
Inc. over 1913	2398	.....	45923	45417	215	926
Decrease	.....	1365	.....	.....	.....	.....

item in determining the cost of milk production. By allowing $3 credit for manure, it leaves a net cost of $39.52 at the end of the first year.

Figures for the average net cost of the two-year-old heifer are as follows:

Initial value	$7.04
Feed	40.83
Labor	7.81
Other Costs	13.73
	$69.41
Credit for manure	8.00
	61.41

One-half of the feed cost the first year and one-third for the full two years is for whole and skim milk.

By far the most expensive period in the life of the calf is the first four weeks, the cost being nearly double that for any other four-week period. This high cost is occasioned by its being dependent almost entirely upon whole milk.

The man labor required in raising a heifer is about 40 hours during the first year and 23 hours the second year. The total cost of man and horse labor for the two years is close to $8. The manure produced during the two years has been valued at $8; consequently, the cost of labor is practically offset by the value of the manure.

The item "Other costs" consists of expenses usually overlooked in estimating costs. These are interest, charge for the use of buildings and equipment, expense for bedding, miscellaneous expenses, a share of the general expenses for the entire farm business, and a charge to cover losses by death and discarding. The total for these forms nearly one-fifth of the total cost of the two-year-old heifer.

The foregoing figures show that it costs more to raise calves to maturity than is commonly supposed, and they support the advice which the Department is continually trying to impress upon dairy farmers, that it does not pay to raise any but the best heifers. Raising scrub heifers and selling them at $25 to $40 apiece, as many do, is unprofitable except on cheap land or under other very favorable conditions. But it does pay to raise the best heifers, for in good dairy sections well-bred heifers are worth considerably more than $60 when two years of age. Furthermore, dairy farmers as a rule are obliged to raise their own stock, as it is difficult to buy productive cows at a reasonable price. In some sections of the West where alfalfa is worth only $4 or $5 a ton, or in the Southwest where pastures furnish feed the greater part of the year, this cost may be greatly reduced. Even where it costs $60 to raise a heifer, two-thirds of this amount is charged for feeds at market prices, a large part of which can be grown on the farm at a profit. Thus by raising the heifers the dairy farmer finds a home market for feeds grown on the farm at remunerative prices, and at the same time aids in maintaining the fertility of the farm.

A NEW FIELD FOR BEEF PRODUCTION

Because of the increasing scarcity of beef, specialists of the Department of Agriculture have been turning their attention to sections of the United States where conditions are such that it may be possible to build up a profitable business in cattle-raising.

With a view to taking a short cut in advising prospective cattle raisers, the Department has issued these thumb-nail suggestions:

Good pastures are essential for profitable beef production. Plant pasture grasses over the waste lands. Use purebred beef bulls for grading up the native stock. Always select the best heifers for breeding purposes. Use the coarse fodders, straws, and the stalk fields for wintering the breeding herd. Wean the calves when the pastures get short.

Silage is usually the best roughage for fattening any class of cattle. More care is necessary in feeding calves than in feeding grown cattle. Hulls and cottonseed meal make an excellent feed for a short feeding period, but do not produce good gains on cattle after the third period. It is not entirely satisfactory to use corn stover as the sole roughage. When Johnson-grass hay costs $10 and hulls $7 per ton it is more profitable to feed the hulls alone. Summer feeding on pasture is usually more profitable than winter feeding. Finishing cattle early in the summer is usually more profitable than finishing them later in the season.

These suggestions while compiled chiefly for the use of southern cattle raisers are generally applicable to cattle-raisers in the north and should be given serious consideration. Those who desire to delve more deeply into the subject should send to the Department of Agriculture for a copy of Farmers' Bulletin 580, "Beef Production in the South," or to the Representative in Congress or Senator from the local district.

ST. PAUL-UNION STOCKYARDS COMPANY, SOUTH ST. PAUL, MINN.

Comparison of the Origin and Disposition of Livestock for May, 1914

Origin of Livestock Received

States	Cattle	Calves	Hogs	Sheep	Horses	Total Cars
Minnesota	19448	11033	91140	5254	59	2206
Wisconsin	1654	1449	9720	83	16	212
Iowa	98	79	141		57	11
Far South	114				77	8
So. Dakota.	599	75	8510	193	29	149
No. Dakota	2494	377	17895	889	31	340
Montana.				9147	148	42
Far West				4197	23	15
Manitoba&N.W.T.	762	26	1556			44
Far East	16					1
Returned	99	1				2
Totals	25284	13040	128962	19763	440	3030

Disposition of Livestock

So.St.Paul P'k'rs	7776	6864	97942	12519		
City & St. Butch.	226	21	636			17
Outside Packers	184	875	28007			294
Minnesota	7282	751	671	1001	132	260
Wisconsin	5199	100	140	638	105	181
Iowa	1363	64	281	42	1	53
Nebraska	300	67				7
Kans. & Mo.						
So. Dakota.	1887	1041				64
No. Dakota	1075	124				33
Mont. & West	588	279			1	25
Far South						
Manitoba&N.W.T.				928		4
Mich. & E. Can.	153	2	626			10
Chicago	1261	10	400	17066		114
Ills.(ex Chicago)	734	18				30
Eastern Points	24				187	8
Returned	99	1				2
Totals	20375	3353	30761	19675	426	1102

Poultry Department

HISTORY OF THE WYANDOTTE FAMILY

Michael K. Boyer

Thy Wyandotte family has been the greatest competitor the Plymouth Rock family has ever had, and the battle for supremacy between the two breeds has at times been very severe.

The first of the Wyandotte Class to make its bow to the poultry world was the Silvers. In the solution of the origin of this variety there seems to be nothing really authentic. It has been generally believed that they were produced by a cross between the Dary Brahma and the Silver Spangled Hamburg—there is nothing tangible, however, that this is anything more than a supposition. The evidence is circumstantial.

The late Professor T. E. Orr, of Pennsylvania, once said that there were no Wyandottes prior to 1883, but J. Y. Bicknell claims that in 1868 a neighbor of his residing in New York bred the Silvers, or what afterwards were termed Silvers.

Joseph Wallace said there was evidence of a first cross between a Seabright Bantam and a Buff Cochin hen, or Yellow Chittagong, as some called the Buff Cochins as early as 1868 or 1869.

The credit of naming the variety belongs to F. A. Houdlette, of Massachusetts. Previously they had been bred under the titles of "Hambrights," "Hambletonians," "Eurekas," "Excelsiors," "Columbians," "Seabright Cochins," Seabright Brahmas," and "American Seabrights."

Isaac K. Felch says that he believes it was the intention with the first cross to produce an improved Cochin Bantam, the cross being a Seabright Bantam cock with a Cochin hen. As the size of the cross was too large for the bantam class, they were offered as Seabright Cochins, which, in turn, suggested the cross of Silver Spangled Hamburg with Buff Cochin. These two crosses, crossed with another cross thru a half-breed and Cochin hen finally became the product that was then known as American Seabrights.

But with all this data J. Y. Bicknell declares that the statement of any one as to a knowledge of the origin of the Wyandottes, is not to be relied upon, "for there is not a living man who knows when they made their first appearance."

There seems to be considerable confusion in this matter, with the statements of Felch, Bicknell, Wallace and Whitaker disagreeing, except in a few instances. They do agree that the foundations for the Wyandottes of 1883 were laid back in the seventies. They also agree that several fanciers had the same object in view, and which in the seventies were known as the Seabright Cochins.

In a United States Bulletin published in 1901, Thomas F. McGrew said the theory of their origin is that John P. Ray, originated a rose-comb fowl by a cross of a Seabright Bantam male and a Yellow Chittagong, which he named Seabright Cochin.

The Golden variety came next. It was originated by the late Joseph McLeen, of Wisconsin, under the name of "Winnebagoes." They resulted from a cross between the Rose-Combed Brown Leghorns, Pea-Combed Partridge Cochins, and some Buff females (the latter a result of a Golden Seabright and Buff Cochin cross). This was in 1880, and in 1888 the breed was admitted to the Standard.

The White Wyandottes came as sports from the Silvers. The origin of the breed is conceded to George W. Toole and Reverend B. M. Briggs, of New York, but it is claimed that to Fred A. Houdlette, of Massachusetts, belongs the credit of first bringing them before the public, about 1885, and three years later it was admitted to the Standard.

The Black variety followed, which is said to have originated as a sport from the Silvers, in the yards of F. M. Clements, Jr., of Ohio, in the year 1885. These sports being pullets, he mated them to a Silver male having black body plumage and a silver hackle.

F. J. Marshall, of Georgia, who in 1885 lived in Ohio, had two similar sports, one a pullet almost solid black, and the other a cockerel that was not quite so black as the pullet. These he mated, and raised something like twenty young from that mating. He inbred for several years, when he heard of F. M. Clements's efforts in that line, and traded cockerels with him, thus infusing new blood.

Between 1886 and 1893, a number of fanciers residing in different sections of the country were aiming to produce Buff Wyandottes, but scarcely the same method was followed by any two of them.

In the early nineties, the late R. G. Buffington, of Fall River, Massachusetts, crossed Silver Wyandottes to Rhode Island Reds. In turn this cross was bred to the others with the Cochin cross. One party crossed Golden Wyandottes with Buff Cochins. Another, White and Golden Wyandottes, and this cross back again to Goldens.

It is said that no individual can claim the honor of originating the Buff Wyandottes, as the variety of the present day is a composite of the results of several efforts at its production made during the time extending from 1885 to 1890.

The first mating for the production of Penciled Wyandottes was made in 1889, by George H. Brackenburg and Ezra Cornell, of New York. It was made by crossing a Golden Wyandotte male on a Partridge Cochin female. A pullet from this cross was mated to a Daggett Golden Wyandotte cock, and from this latter cross only one pullet was selected, which in turn was mated to a Golden-Penciled Hamburg male. The result of this cross was then mated to Partridge Cochins both ways.

In other words, a Hamburg-Wyandotte-Chochin cross male was mated to two Partridge Cochin females, and three or four of the best Hamburg-Wyandotte-Chochin cross females were bred to a pullet-breeding Partridge

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Cochin male. The result was the Eastern strain of Partridge Wyandottes.

There were two strains of Partridge Wyandottes, known as the Eastern and the Western. The latter was originated by Joseph McKeen, who, as above noted, originated the Golden Wyandottes, assisted by E. O. Theim, of Golden Wyandotte male on Partridge Cochin female for the purpose of strengthening their Goldens. Four years later they again made the cross, but this time with the aim of producing Partridge Wyandottes.

While in 1894 George H. Brackenbury, of New York State, was busily engaged in developing the Partridge Wyandottes, the late Ezra Cornell became interested. He mapped out a course of crosses and recrosses by which a new member of the Wyandotte family could be created. He consulted with Mr. Brackenbury, and, following out the Cornell plan they together bent their energies to developing the Silver-Penciled breed.

The first attempt made was to cross a Partridge Wyandotte male on a Dark Brahma hen. This give them both silver males and females with red wings. At the same time Dark Brahma and Silver-Penciled Hamburg females were mated to Silver-Laced Wyandotte males. The results were Wyandotte-Brahmas and Wyandotte-Hamburgs. From this on crosses and re-crosses, with all kinds of success, finely established the Silver-Penciled Wyandottes.

The Columbian Wyandottes were originated by Rev. B. M. Briggs, of Woonsocket, Rhode Island, about 1887. That is, about that time he sold a lot of White Wyandottes to a neighbor who bred Barred Plymouth Rocks. By accident a cross was effected by a Plymouth Rock hen and one of the White Wyandotte males. From this mating two pullets were hatched with clean legs, penciled hackle, and a body inclined to white, having very much the color of the Light Brahmas, but the general shape and style of the Wyandotte.

Mr. Briggs purchased these pullets and the following spring mated them to a white Wyandotte male, with good results. Then by a series of breeding, culling, and careful mating he finally effected what is known as the Columbian Wyandotte. Mr. Briggs firmly asserts that no introduction of Light Brahma blood had been used. Afterwards a strain was effected by crossing White Wyandotte on Light Brahma. E. O. Theim, of Iowa, secured Wyandotte shape and Light Brahma markings by a cross resulting from mating a Silver-Penciled Wyandotte cockerel with a Buff Wyandotte and a White Wyandotte hen. He also mated hens from a cross of Buff and White Wyandottes with a Light Brahma male.

The Buff-Laced Wyandotte was originated by Ira C. Keller, of Ohio, but this breed has not, as yet, been admitted to the Standard.

For variety of colors the Wyandotte family is famous, almost any taste can be satisfied, and it is remarkable how, in such a large class each breed of the family has the true shape and style of the original Wyandotte. They are excellent table poultry, none superior for broiler purposes, and are grand layers, especially during winter. The color of the eggs runs from a light to a dark brown.

A lesson is taught in the fact that the American people in particular, and all people in general, are willing to pay a good price for guaranteed fresh eggs. The select trade cannot afford to be kept in doubt for merely additional cost. They want to feel sure that the egg they are about to open is strictly fresh. The wide-awake poultryman naturally seeks this trade.

There was a time when hotels bought eggs at the general market. They were not particular. But the class of patrons today are such that demand purity. They must have things fresh. The result is that, in order to hold their patronage, the high class hotels and restaurants today will buy their eggs only from such poultrymen who can produce the desired article. For this privilege they are paying from five to ten cents a dozen more than eggs generally command.

Changes in Prices for Poultry Products

Apparently farmers are obtaining on an average less for their butter, and slightly more for their eggs and chickens, according to the Department of Agriculture, than they did this time last year. The average price paid to the farmer for butter on May 1, 1914, was 23.8 cents per pound or 3.2 cents less than the average price paid

Hatching Eggs For Sale

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WHITE ORPINGTON, S. C.
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Rose Comb Red Cockerels for $1.50; and Fawn and White Indian Runners, $2.50 per pair, if taken now.
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White and Columbian Wyandottes, Light Brahmas, and S. C. White Leghorns
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on May 1, 1913. The farm price for eggs on May 1 this year was 16.8 cents a dozen or about .7 cent higher on an average for the country than on May 1, 1913. In most of the states the price was the same, or varied only by 1 cent one way or the other. The price paid to farmers for chickens on May 1, 1914, was 12.5 cents or about .7 cent a pound higher than in 1913, or an increase of 5.9 per cent. The variation in the price of chickens was commonly less than 1 cent a pound.

Professor James E. Rice says shutting hens in small and poorly ventilated houses and in small yards always lowers vitality, which will be shown in the chickens of the next year. The hen that has wide range and secures part of her own food is a business hen. She can stand the strain of laying an egg every day for a greater part of the year and she can transmit vigor to her chickens. Our experience in using closed houses and small yards lessened the egg-production, fertility of eggs, and vitality of chickens.

A. G. Gilbert, poultry manager of the Central Experiment Station at Ottawa, Canada, says a durable and lasting whitewash may be made as follows: Put into a water-tight, clean barrel half a bushel of unslaked lime. Slake the lime by pouring sufficient hot water into the barrel to cover the lime to a depth of five inches. Stir briskly until slaked. Add two pounds of sulphate of zinc and two pounds of salt dissolved in hot water. These ingredients will prevent the wash from cracking or peeling off. It is better to apply the whitewash while hot. If to be used for inside of poultry house, colony houses or coops, add half an ounce of carbolic acid. To color the whitewash, add yellow ochre, venetian red or any other desired color.

The late census shows us that the American hen gives us 16,000,000,000 eggs a year these days. The census shows us there are over 200,000,000 laying hens in the United States, and this is not to be taken as a high estimate, as the lowest number in a census given is the rule where hens and eggs are concerned. The value of the hens the United States over is estimated at $70,000,000. All other fowls bring the value up to over $85,000,000 $85,000,000. If divided this would give every person in the United States $1.12, and the eggs, if divided aright, would allow every person, child or grown-up, 203 eggs a year for their own eating. The weight of the eggs laid in a year tips the scales at 970,363 tons.

School and Home

A KITCHEN FOR THE FARM

Why is it that so many people still give so little thought to making a kitchen attractive and bright and cheerful? The idea used to be to have things in a kitchen that would not show the dirt. The idea now is to have things in a kitchen that can be scrubbed.

Many kitchens are done now in blue, probably because porcelain utensils and crockery bowls are made in such lovely shades of blue. If you have only a few utensils of this blue porcelain ware they give a note to the kitchen that can gradually be followed out in everything.

Kitchen walls should never be papered. Even the glazed papers are not practical. Paint is the only thing that can stand both the wear and tear and the constant scrubbing that is necessary over the sink and on other parts of the walls that are apt to be spattered with grease from the stove. It is a good idea to paint the walls and ceiling the same color.

Linoleum is, in the long run, about the best floor covering for a kitchen. It is easily cleaned, the grease and dirt do not sink in, it wears well and comes in very good designs.

It is well to have in a kitchen just as many shelves as possible and have these covered with shelf oil-cloth that looks like shelf paper and hangs down over the edge. The great advantage of the oil-cloth, as against the paper, is that it can be wiped off with warm suds and, if cared for, lasts for years.

Have plenty of little brass hooks screwed in the under side of the shelves. They are the greatest possible comfort. Under the china shelves cups can be hung and you can in this way avoid stacking them in perilous piles that look like the leaning tower at Pisa. Under the shelves where the utensils are kept, skillets and saucepans may be hung.

If the kitchen is so small that it is possible to have only one table in it, a good plan is to have a shelf about three feet long and two feet deep hung against the wall on hinges about the height of the table. Under this there should be two legs, that drop down automatically as the shelf is lifted up into position. This device has been found very useful in small kitchens. It answers the purpose of a table when one is needed and can at other times be dropped flat against the wall. A white oil-cloth stretched over the kitchen table and tacked underneath adds to the clean, neat appearance of things and is much more desirable than half-soiled red and white table-cloths.

There is no reason why kitchen chairs should be ugly. When the fact was once commented upon that two young people had chairs of real artistic value in their kitchen they answered "they cost no more than ugly ones." However, it is not always possible to pick up real pretty things in a second-hand shop for almost nothing. But it is easy to buy the simplest, plainest things and these are always appropriate in a kitchen. It is the fussy cheap things that take away the restfulness and charm of many a home.

In the kitchen of every women who does her own cooking there should be a fireless cooker. They are labor-saving, time-saving, efficient and economical. The cheapest parts of a beef become tender and delicious when cooked in a fireless cooker.

There are many labor-saving devices now available and it is the woman's turn to buy machinery that will in any way lighten her work in the home. We have all seen the value of machinery on the farm and it will not be long before we recognize the same fact in the home—that brains can be put to good use while machinery is made to do the manual labor.

POTATO SPRAYING

During the summer of 1913 an extensive series of potato-spraying experiments was conducted by the New York Agricultural Experiment Station. In each of 66 fields a portion of one row (1-50 of an acre) was very thoroly sprayed by hand every two weeks. At digging time the yield of this row was compared with that of an adjacent row which had not received the special spraying. In 47 of the fields no spraying was done by the owner. In these fields the test was a comparison between very thoro spraying and no spraying. In the other 19 fields more or less spraying was done by the owner. In these, the test was a comparison between very

thoro spraying and the kind of spraying done by the owner.

In the 47 unsprayed fields the spraying done by the station increased the average yield by 17.76 bushels per acre, or 16.4 per cent; and in the 19 sprayed fields, by 15.04 bushels per acre, or 11.2 per cent.

It is believed that the increase obtained was due to the partial control of tipburn which was quite plentiful in some fields, the better control of Colorado potato beetles (not well controlled by the owner in a few cases) and stimulation of the plants. Late blight was entirely absent and early blight and flea beetles scarce. Probably the gain from spraying would have been considerably larger had not the plants been killed prematurely by an early frost.

THE COST OF PASTEURIZING MILK

With a properly designed and properly operated plant, the average cost of pasteurizing milk is $.00313 a gallon, and of cream $.00634 a gallon, according to tests recently conducted by the U. S. Department of Agriculture. These tests also show that the "flash" process, by which milk is raised to a temperature of 165 degrees F. and kept there for a moment only, is more expensive than the "holder" process, in which milk is maintained for 30 minutes at a temperature of 135 degrees to 145 degrees. The "holder" process requires 17 per cent less heat than the other, and in addition, there is a saving on the expense of cooling. For hygienic reasons, also, the Department recommends the "holder" process.

Many milk plants and creameries, it was found, do not attempt to make any use of the latent heat in the exhaust steam from their engines and steam driven auxiliaries. This heat would be sufficient, in many cases, for all the pasteurizing done in the plants, if it were properly utilized instead of being permitted to go to waste. When exhaust steam is used, it is calculated that for every 400 pounds of milk pasteurized per hour with it, one horsepower is taken from the boiler load, with a consequent saving in fuel cost.

Another common source of waste was found to be the faulty arrangement of apparatus and leaky piping. The loss from these causes may run as high as 30 per cent of all the heat required, a loss that can be reduced to negligible proportions by proper arrangement. The use of the regenerator, in particular, by which a large portion of the heat in the pasteurized milk is transferred to the raw product, is also an important factor in securing maximum economy.

In considering the cost of pasteurizing, the investigators estimated the life of the necessary apparatus at four years, and the annual depreciation, in consequence, was figured at 25 per cent. This is due to the fact that the whole dairy apparatus must be taken apart after each operation in order to give it a thoro cleaning. This necessarily results in rough usage. The mechanical equipment, such as the engine, boiler, shafting, etc., has, on the other hand, been considered as depreciating at the rate of only 10 per cent per annum.

In these tests the results of which are contained in Bulletin 85, the investigators have confined themselves entirely to the engineering features of pasteurizing, their object being to ascertain as closely as possible the necessary cost of the process. The hygienic and sanitary aspects of the question are covered in other publications of the Department of Agriculture.

GOOD FARMING LAND OPENED UP

Large tract of good valley farming land just thrown open for free settlement, in Oregon. Over 200,000 acres in all. Good climate, rich soil, and does not require irrigation to raise finest crops of grain, fruit, and garden truck. For large map, full instructions and information, and a plat of several sections of exceptionally good claims, send $3.40 to John Keefe, Eugene, Oregon; three years a U. S. surveyor and timberman. An opportunity to get a good fertile free homestead near town and market.

—Adv.

FARMERS' CLUBS

The Better Farming Clubs of North Dakota have become a big factor in promoting better farming, better homes, and a better social conditions.

These clubs have been organized by the Better Farming section of the North Dakota Experiment Station. The clubs are assisted in the work by the county agents and by a list of topics sent to them monthly by the Experiment Station. This list carefully outlines a number of topics that are seasonable. The list for March, for instance, outlined the following subjects: Farm Poultry; Seed Testing; Arrangement of Kitchen Equipment; The Farm Garden; Alfalfa.

The following is the outline and references given for alfalfa:

Alfalfa—Outline: Description. Varieties for North Dakota. Hardy and pure seed essential. Soil requirements. Preparation of seed bed. Time to sow. Rate and method of seeding. Why nurse crop objectionable. Inoculation. Care first season. Prevention of winter killing. Causes of past failures. Curing hay. Value as hay crop, as pasture. Seed production. Alfalfa in rotation.

References:—N. D. Bul. No. 95—Press Bul. 43—Farmers' Bulletins Nos. 194, 339, 495. Better Farming Section. Each subject is outlined similarly and references given as to material on it.

The subjects thus outlined since last September have included: Selecting Seed Corn, Hogging Off Corn, and Fall Plowing, for September. Hog Cholera, Care of Live Stock in the Fall, and Finishing Hogs for Market, for October. Co-operation, National

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WE AIM TO PLEASE

Currency Bill, Meat on the Farm and Winter Egg Production, in November. Winter Care of Farm Horses, Barnyard Manure, (Short Course at A. C.) Farm Bookkeeping, Ice on Farm, and Conveniences in the Farm Home, in January. Importance of Good Seed. Kitchen Floors, Care of Brood Sows, Traveling Libraries, and Community Breeders Association, for February, and for April: Potato Culture, Dairying in North Dakota, Corn, Arrangement of Kitchen Utensils, Pork Production, and Tillage.

These subjects with their outlines, and references form a most valuable source of information. The clubs that have followed the outlines have had a splendid course in agriculture.

These clubs send in reports of their meetings to the Experiment Station. The following are some of the activities of the clubs, as reported this spring:

Farmers' Social and Economic Club met at home of the president. Discussed farm bookkeeping and how to estimate values of land.

South Prairie Farmers' Club met at home of a member. Discussed hog and poultry raising, alfalfa growing and the possibilities of securing home grown seed corn. Ordered two car loads of white oak fence posts and 20 pounds of fish.

Dazy Farmers' Club; met at home of Geo. N. Rasmissen. Attendance, 22 families; the ladies organized a club and had a program, at which they took up household labor-saving devices and how to make inexpensive articles for the home. The men discussed community breeding, and the purchase of a carload of Marquis wheat for seed.

Better Farming Club of Rogers met in the Rogers School house. The discussion was in Livestock Shippers' Association, and Alfalfa. The club also appointed a committee of three to visit the Stewart Club for the purpose of securing their co-operation in a Shippers' Association.

Chilton Farmers' Club met at the school house and took up the subjects of bookkeeping on the farm, ice on the farm, and building a hen house.

Calvin Farmers' Club met in school house. The topics on program were: A Beef Ring. The committee on posts and fencing made a report. It was referred back to the committee for further investigation.

Daniels Farmers' Club met in Yeomens' Hall. Discussed the shipping in of posts and woven wire fencing in car load lots. Several recitations were given and some musical numbers.

Clyde Farmers' Club met in K. P. Hall. Subjects taken up, Alfalfa, A Beef Ring, and Corn. The club members have since organized the beef ring.

Farmers' Club of Forda met at school house No. 4. Debate: Dairy vs. Beef Cattle. Several songs were given also humerous readings and a newspaper edited by a member.

Cleveland Farmers' Club met in the consolidated school. Subjects on program: Dairying, Contract System of Building Roads, and Improvement of Farmers' Wife's Kitchen.

Russell Farmers' Club met in the hall at Russell. Discussed seed corn, fence posts, and alfalfa. The club ordered two carloads of posts, 100 bushels of seed corn and 40 pounds of Grimm Alfalfa seed.

This will give an idea of the work that these farmers' clubs are doing. It also gives expression to the things that the farmers are striving after, and that the Better Farming Division of the North Dakota Experiment Station is helping them accomplish.

There are now 375 clubs; some meet twice a month; others once a month, which means that this many farmer communities are taking advantage of the strength that comes from co-operation in studying their farm problem, and in carrying on their farm business.

It will pay each secretary to send the N. D. F. his address. Pubs.

THE MCLEAN COUNTY POTATO GROWING CONTEST

One of the most interesting potato contests that has ever been offered to the school children of McLean is being offered by the agricultural department of the Soo Railroad. The contest will consist in producing good Early Ohio Potatoes, the seed to be furnished by the "Soo" upon application as above stated. The potatoes are to be cut in four pieces just as they are planted, each of the four pieces to occupy hills adjoining in the row. The next potato is planted in the same way and so on until the potatoes are all planted.

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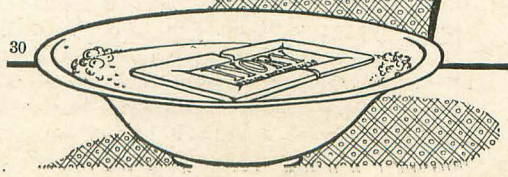

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At the time of digging each four hills are dug separately those hills which have produced only good yields of potatoes are saved for seed and the rest to go into the general lot to be used. The object being to select only potatoes for seed that are high yielders.

Select the 10 most uniform and perfect potatoes for exhibit and judging. Send or bring these to the Corn Show on September 25th, 1914 at Garrison. The prizes will consist of a first prize of $5.00 cash, second prize of $4.00, third prize of $3.00, fourth prize of $2.00 and six prizes of $1.00 each. Be sure your name and address is plain. Be sure you make application at once so that seed may be furnished you.

T. L. Stanley, Manager,
Garrison, N. D.

A VALUABLE REPORT

The Northern Pacific Railway Company, thru its Agricultural Extension Department, has been carrying on careful demonstration work along the line of soil fertility, cultivation and seed selection during the past season.

A concise report by R. F. Murray, Agricultural Extension Agent, has just been published describing the work done last season. The data are of much value to all who are engaged or interested in farming and this information should be in the hands of every intelligent or ambitious farmer.

Farmers or business men in Minnesota and North Dakota, where the experiments were tried out, may be supplied with copies of the report free, upon application to the agents of the Northern Pacific Railway or to Mr. Mr. A. M. Cleland, Generál Passenger Agent, Northern Pacific Railway, St. Paul, Minn.

COMMUNICATION

Editor North Dakota Farmer:

On the front page of the issue of his paper "The American Homestead" Mr. Chas. Bryan has this advice to give to the farmers.

"Know where your candidates stand."

The farmers of this county have a right to know just how the county, state and congressional candidates stand on all measures affecting their interest. It is not enough to know how they promise to stand after securing a party nomination. Many a candidate is chosen at a party primary who is not in sincere accord with the platform he is running on. The party platform may be explicit enough on the measures the farmer is interested in, but unless the candidate is sincere at heart, and rings true on vital problems, little can be expected of him in a crisis. These are the kind of men, who, after election, are easily made the tools of special interest in city, county, state and national affairs.

This advice applies especially to the legislative candidates and the farmers who make up the bulk of the voters should first let them know what they want done and second, ask if they are willing to do it.

With one or two exceptions our legislative candidates have not declared their principles or published their platforms and those who have no opposition in the primaries undoubtedly feel that they do not have to "show their hands" since they will be nominated anyhow.

Under the old system political bosses largely controlled the conventions and placed in nomination many men who would serve them faithfully, but it was hoped that the primaries would remedy this evil, still it appears that a deliberate effort has been made to set aside the primaries of this county recently by making the prospective candidate come to a certain committee in order to get the indorsement of the party.

Under the old convention system the people were at least asked to send representatives or delegates to the meeting but under the new "committee" system the ordinary voters were not consulted nor was the time, place or purpose of the meetings given much publicity.

Nor was the "committee" a fair representative committee, being composed principally of bankers.

The primary law was secured after much hard work by the progressive elements of both parties in the state and any attempt to deliberately set it aside and return to boss or gang rule in county or state politics should be frowned on by every wide-awake citizen.

Yours truly,
H. C. Otteson. Calvin, N. D.

The Bluebird

The common and familiar bluebird is an inhabitant of all the states east of the Rocky Mountains from the Gulf of Mexico northward into Canada. It winters as far north as southern Illinois in the Mississippi Valley and Pennyslvania in the east; in spring it is one of the first migrants to arrive in the Northern States, and is always welcomed as an indication of the final breaking up of winter. It frequents orchards and gardens, where it builds its nest in hollow trees, or takes advantage of a nesting box provided by the farmer's boy.

So far as known, the bluebird has not been accused of stealing fruit or of preying upon crops. An examination of 300 stomachs showed that 76 per cent of the food consists of insects and their allies, while the other 24 per cent is made up of various vegetable substances, found mostly in stomachs taken in winter. Beetles constitute 28 per cent of the whole food, grasshoppers 22, caterpillars 11, and various insects, including quite a number of spiders, comprise the remainder of the animal diet. All these are more or less harmful, except a few predaceous beetles, which amount to 8 per cent. In view of the large consumption of grasshoppers and caterpillars, we can at least condone this offense, if such it may be called. The destruction of grasshoppers is very noticeable in the months of August and September, when these insects form more than 60 per cent of the diet.

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Seasonable Receipts

Swiss Steak

One sirloin steak, cut thick, about four pounds. Pound one pint of flour into it with a heavy plate. Fry brown on both sides in butter. Place in covered baker; pour over one cup of boiling water and let simmer two hours. When cooked one hour, cover with five sliced onions, if liked.

In this day of high-priced meat a round steak can also be used by the above recipe with good result.

VEAL SOUP

A knuckle of veal; three quarts cold water; salt; simmer four or five hours very slowly. Add one tablespoon rice when nearly done. Put yolk of one egg and one cup of cream in the tureen and strain the soup over this stirring all the while. If rice and little celery are desired in the soup, strain before adding rice and celery and pour over the egg and cream.

DEVILED EGGS

Two tablespoons butter, one teaspoon mustard, two teaspoons vinegar, one-half teaspoon pepper, one-half teaspoon salt. Mix all with yolks of hard-boiled eggs and pack in halved whites.

CREAMED EGGS

One heaping tablespoon butter, one heaping tablespoon flour. Melt over slow fire and add one pint milk. Cook till creamy and season with salt and pepper. Add six hard-boiled eggs, cut in two lengthwise and heat thru. A few slices of pimentoes are a great improvement. This is a good dish for lunch.

BAKED EGGS

Break eggs in buttered bake dish; pour over thick cream to nearly cover. Salt and pepper and put in oven until just set.

MOCK ANGEL FOOD

Set one cup milk in pan of hot water, and heat to boiling point. Sift one cup flour and one cup sugar and three teaspoons baking powder, four times. To this add the hot milk, beating till smooth, then fold in beaten whites of three eggs. Moderate oven.

JELLY ROLL

Four eggs, small cup of sugar; beat eggs and sugar very light; one cup of flour, any flavor.

CHERRY ROLL PUDDING

Make a rich baking powder biscuit dough, roll thin and cut into cakes the size of a saucer. Put in each a handful of cherries and fold over. Put in deep baking dish and pour over one cup boiling water, one cup sugar, one tablespoon butter. Bake about twenty minutes or one-half hour covered. Remove cover and bake till brown.

CREAM RICE PUDDING

Two cups milk in double-boiler with two tablespoons cold boiled rice, three tablespoons sugar, pinch of salt. When it boils, beat up well and add three tablespoons cornstarch (Kingsford's), wet with one-quarter cup cold milk. Stir and cook until thick; then add beaten yolk of one egg and vanilla. Serve cold with whipped cream.

PRUNE WHIP

Whites of three eggs beaten stiff. Mix in one cup stewed prunes, chopped fine, a little sugar and vanilla. Bake in buttered pan about 15 minutes. Serve with cream.

STEAMED CHOCOLATE PUDDING

Two cups flour, one-half cup sugar, three teaspoons baking powder, one-half teaspoon salt, three squares Baker's chocolate grated or four tablespoons cocoa, one egg beaten light, three tablespoons melted butter, one cup milk. Mix and sift dry ingredients; add chocolate and mix thoroly with the flour mixture. Mix the beaten egg, milk and melted butter; pour it into the dry materials and beat well. Turn into a buttered pail, cover and steam about two hours. Serve with this

Creamy sauce: One-half cup powdered sugar, two table-spoons butter, two tablespoons cream or milk, one-half teaspoon vanilla. Cream butter and sugar; add cream and cook over hot water until it is creamy; add vanilla and serve.

PINEAPPLE FOAM

One can grated pineapple, one cup whipped cream. Beat whites two eggs; add one-half cup powdered sugar. Fold in the cream, pineapple and juice of one-half lemon. Chill and serve in glasses.

CHEESE GINGERBREAD

One cup molasses, four ounces cheese, one teaspoon soda, one-half cup water, two cups flour, two teaspoons ginger, one-half teaspoon salt.

Heat the molasses and cheese in a double boiler until the cheese is melted. Add the soda and stir vigorously. Mix and sift dry ingredients and add them to the molasses and cheese alternately with the water. Bake fifteen minutes in small buttered tins.

Sunshine Cake

Whites of six eggs; boil one cup sugar and a little water till it threads. Pour in whites and beat twenty minutes. Add yolks and one cup flour.

CREAM MUFFINS

One pint flour, measured after sifting; add one heaping teaspoon baking powder and sift again. Beat together one pint of cream and one tablespoon of butter; add two beaten eggs, mix in the flour, drop in buttered muffin moulds and bake quickly.

BEEF PIE

Four pounds of beef (cut into pieces), sear the beef in a skillet, season with salt and pepper; put in a pot with two cups of sliced onion and enough water to almost cover. Simmer slowly till meat is thoroly done. Take out the meat and thicken the gravy with a tablespoon of cornstarch rubbed smooth in a little water; add a little salt and Worcestershire sauce. Now make a pie crust of a lump of lard, three cups of flour and one cup of iced water, one-half teaspoon of salt. Put two cups of the flour and the lard together. Mix, then pour in the ice water; stir till well mixed. Put some flour on the board, then roll out crust; put in beef covered with gravy, then put on top crust. Bake thirty minutes. Fold a napkin around the baking dish and serve.

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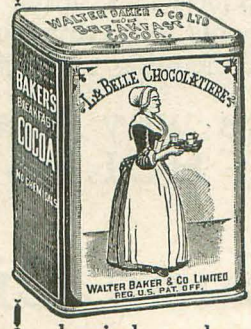
Is Good Cocoa



Of fine quality, made from carefully selected high-grade cocoa beans, skilfully blended, prepared by a perfect mechanical process, without the use of chemicals or dyes. It contains no added potash, possesses a delicious natural flavor, and is of great food value.

WALTER BAKER & CO. Limited
Established 1780 DORCHESTER, MASS.

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MOUND CITY
HORSE SHOE BRAND
TRADE MARK
PAINTS & VARNISHES
PRESERVE & BEAUTIFY

Why "Mound City" House Paint HOLDS Its Gloss

WHY do you see so many dull, faded-looking houses?

The trouble with such houses is that they are Oil-hungry. They are painted with a paint that has not enough Linseed Oil in it—a paint that never *could* have enough Oil in it on account of the character of the pigments used.

The best Paint *must* do two things. It must preserve and beautify. Do you know that Linseed Oil is *the* great preservative in Paint and that if it were not for the sake of appearance, you could give your house a coat of pure Linseed Oil, and it would be protected?

The solid part of Paint (Strictly Pure White Lead, Strictly Pure Zinc, and, in some Paints, baser metals) acts as beautifier only.

Strictly Pure Zinc absorbs more Oil than any other pigment and that is the reason for its use in Horse Shoe Paint. WHITE LEAD is used for its covering qualities, and ZINC for its *Oil-carrying* capacity.

And Oil-carrying capacity is what your Paint *must have* if your property is to be protected.

Horse Shoe Paint, while it covers and beautifies the surface thoroughly, is made of pigments that carry so much oil, that the *first* coat satisfies the oil-hunger of the wood leaving the second coat to gloss, harden, protect, and beautify.

That's why Mound City Horse Shoe Brand House Paint HOLDS its gloss.

Mound City Paint & Color Co.

GOOD MAKERS OF GOOD PAINTS

St. Louis, U. S. A.

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